

HDIS

Health Department Information System

Helping You...Help Others

Health Services Vaccine Accountability Procedure

HDIS

Health Department Information System

Helping You...Help Others

**Health Services
Vaccine Accountability Procedure
User Manual**



The Baldwin Group, Inc.

7550 Lucerne Drive

Suite 306

Cleveland, OH 44130

(440) 891-9100

FAX (440) 891-9458

Copyright © 1996 - 2020

The Baldwin Group, Inc.

ALL RIGHTS RESERVED

HDIS are trademarks of The Baldwin Group, Inc.

No part of this publication may be stored in a retrieval system, transmitted, or reproduced in any way, including but not limited to photocopy, photograph, magnetic, or other record, without the prior agreement and written permission of The Baldwin Group, Inc.

Windows® and MS-DOS® are registered trademarks of Microsoft Corporation.

Other trademarks are owned by their respective companies.

Disclaimer

All data examples containing personal names, company names (or companies), vehicle information, or locations that appear in this guide are fictitious in nature and do not refer to, or portray, in name or substance, any actual names, organizations, entities, or institutions. Any resemblance to any real person (living or dead), organization, entity, or institution is purely coincidental.

Contents

Vaccine Accountability Procedure	1
On-Hand Procedures	2
Updating On-Hand Inventory details	3
Current on-hand inventory levels	3
Generate system calculation of inventory levels	6
Vaccine Accountability snapshot	8
Move End of Month inventory figures to Beginning of Month	9
Update Vaccine Lots No Longer in Inventory	10
Removing Lot from Active Inventory	10
Restoring Lot into Active Inventory	12
Excluding Lot from Data Entry	13



Health Department Information System

Helping You...Help Others

Health Services Vaccine Accountability Procedure



Vaccine Accountability Procedure

Health Departments will often do a count of the vaccine inventory currently on hand. Such count of inventory is used to determine the need to order new inventory of vaccines, reconcile count of actual inventory against inventory levels calculated by HDIS, and update HDIS of vaccine inventory that is no longer in active circulation.

The **Vaccine Accountability** process consists of the following steps:

1. Audit the inventory currently on hand, writing such figures on a **Vaccine Inventory On Hand Report** printed from the Vaccine Inventory Maintenance screen.
2. Enter current inventory levels in the vaccine lot details.
3. Generate the Vaccine Accountability report to gather the details for inflow / outflow of vaccines and calculation of remaining on hand inventory balances.

The calculated on hand inventory balance is compared to the current on hand inventory levels entered in step #2, identifying any lots for which the inventory figures do not match.

4. When one or more lots do not have matching inventory levels, research, identify and correct issues in the data leading to the inventory figures not matching.
5. Generate the Vaccine Accountability report again, to confirm the corrections entered result in matching inventory figures.

If any vaccine lots still do not balance, return to step 4 for such lots.

When inventory figures for **ALL** vaccine lots match, specify to update the vaccine lot details with the calculated on hand figures which balance with the actual inventory figures.

6. When the current accountability cycle is closed and the inventory figures are reconciled and balanced, run **Move End-of-Month to Beginning-of-Month** process to archive the On-Hand details for completed cycle and reset the details for the next cycle.
7. For vaccine lots that show on hand inventory level of zero and no longer in active circulation, update such lots to remove them from active use in HDIS.

These steps are discussed in more detail on the following pages.

On-Hand Procedures

The On-Hand Balance Maintenance screen is for managing the data details used to verify that the on-hand quantities reflected in HDIS match to the on-hand quantities obtained when auditing inventory.

This screen is reached by clicking the **On Hand Procedures** button at the bottom of the Vaccine Inventory Maintenance screen.

Vaccine Inventory On-Hand / Balance Maintenance Screen

Vaccine Name	Type *	Lot #	Calculated On-Hand	Actual On-Hand Previous	Actual On-Hand Present
DTaP-Hib-IPV (Pentacel)	DHI	PC5515AA	0	3	3
DTaP-Hib-IPV (Pentacel)	DHI	PC5572AA	0	5	5
DTaP-Hib-IPV (Pentacel)	DHI	VC5462AA	0	6	6
DTaP-Hib-IPV (Pentacel)	DHI	VC5517AA	0	20	20
DTaP - IPV (Quadracel)	DI	PC5248AA	0	12	12
DTaP-IPV (Kinrix)	DI	VA73C4	0	3	3
DTaP - IPV (Quadracel)	DI	VC5248AA	0	10	10
DTaP-IPV (Kinrix)	DI	VC5325BA	0	20	20
DTaP	DTAP	PC5117AA	0	4	4
DTaP	DTAP	PC5171AA	0	10	10
DTaP	DTAP	VC5254AA	0	28	28
DTaP	DTAP	VT79X3	0	50	50
HepA(adult)	HEPA-A	PR012739	0	6	6
HepA(adult)	HEPA-A	SPZ353	0	38	38
HepA(ped/adol)	HEPA-P	PR012988	0	18	18
HepA(ped/adol)	HEPA-P	VR006210	0	4	4
HepB(adult)	HEPB-A	P5YY7T	0	20	20
HepB(adult)	HEPB-A	S943Y5	0	10	10

Lot Prefix: (Blank for All)

Move End-of-Month to Beginning-Of-Month Balance

Calculate Current On-Hand Balances

Buttons: Calculate On-Hand, Move EOM Balance to BOM Balance, Print, Update Actual On-Hand, Exit

Details for the On-Hand Balance of vaccine inventory

On-Hand Inventory Data Details:

Description	Name or description of what the classification definition is about.
Vaccine Name	Name of vaccine which lot detail record pertains to.
Type	Abbreviation associated with the vaccine name
Lot #	Vaccine Lot # value for the record
Calculated On-Hand	The On-Hand inventory level calculated by one or more of the following: Calculate On-Hand process, the Vaccine Accountability process, or Inventory Transaction entry.
On-Hand Previous	The On-Hand inventory level value last entered in the On-Hand Present column.
On-Hand Present	The actual inventory level obtained from the manual count of actual inventory. Values are entered in this column to then update the system via the Update Actual On-Hand process.

Updating On-Hand Inventory details

The on-hand inventory figures need to be updated to reflect the inflow / outflow of vaccine lot inventory.

Details per inflow / outflow resulting from transfer/exchange of inventory with another party, along with inventory which has expired or been wasted, are entered in the Transaction Screen. The process of entering these details is discussed in the Health Services Vaccine Maintenance User Manual, beginning on page 33.

Details per outflow of inventory as result of vaccinations administered to patients are generated from the details of vaccination activity entered in the Health Services screen.

Once all data for activity pertaining to the inflow / outflow of inventory has been entered, we are ready to generate the updated inventory level figures based on data activities entered in Health Services. The sequence of actions to accomplish this is detailed below.

Current on-hand inventory levels

By default, as you enter the **Vaccine Inventory On-Hand Maintenance** screen, the on-hand figures for all vaccine lots will be displayed. If you wish to only view the details for lots with a specific prefix, you can do so by selecting the desired prefix in the **Lot Prefix** selection in the top right section of the screen.

Lot Prefix (Blank for All)

When you take inventory, you will probably need to write down the inventory levels counted for each lot. You can generate a printout of all active vaccine lots which will show the previous inventory level and provide space to write in the current inventory level as well as quantity of inventory that has Expired or Wasted. A small sample of the on-hand report is shown on the next page.

Current on-hand inventory levels (continued)

Vaccine Inventory On Hand Report

10/20/2020

Type	Lot	Manufacturer	VIS	Expires	Doses Expired	Doses Wasted	On Hand Inventory Details		
							Previous	As Of	Current
DHI	AUJ013AAA	Sanofi Pasteur	11/05/2015	10/10/2020			15	11/01/2019	
DHI	MC5298AA	Sanofi Pasteur	05-17-07	03/18/2018			18	07/05/2017	
DHI	PC5336AA	Sanofi Pasteur	05-17-07	03/04/2018			7	07/05/2017	
DI	MAF543	GlaxoSmithKline	05-17-07	11/10/2018			20	07/05/2017	

As the tallying of inventory is done, you can write the figures for current on-hand inventory levels, along with quantity of inventory that has expired and/or wasted.

Enter the current on-hand inventory figures in the On-Hand Present column of the grid display. The cell currently selected for entry will be highlighted in green. As the current on-hand inventory figures are entered, the color of the On-Hand Present entries which are changed will show in yellow, as shown here:

Vaccine Name	Type *	Lot #	Calculated On-Hand	Actual On-Hand Previous	Actual On-Hand Present
DTaP-Hib-IPV	DHI	MC5298AA	0	19	15
DTaP-Hib-IPV	DHI	PC5336AA	0	7	7
DTaP-IPV	DI	M43HB3	0	18	12
DTaP-IPV	DI	MAF543	0	20	20
DTaP-IPV	DI	P43HB3	0	10	10
DTaP-IPV	DI	P7574T	0	10	10

Upon entry to update the On-Hand Present figure, the cursor will automatically advance down to the cell for the next lot. Upon entering the figure for the last lot displayed, the screen display will automatically advance to display the next page of lots.

One additional detail to be specified about the On-Hand Present figures is the 'As Of' date which the inventory audit took place. The default is current date. If entry of such present on-hand figures does not occur the same day, user can change the 'As Of' date to the appropriate date value.

Once all figures are entered and verified to be correct, click the Update Actual On-Hand button located below the lower right corner of the on hand inventory grid display.

10 10 ▾

Update Actual On-Hand As Of 07/05/2017

Current on-hand inventory levels (continued)

This process will update the value displayed in the On-Hand Previous column as well as in the Actual Inventory and As Of date values displayed in the main Vaccine Inventory screen. Examples of these updates are displayed below.

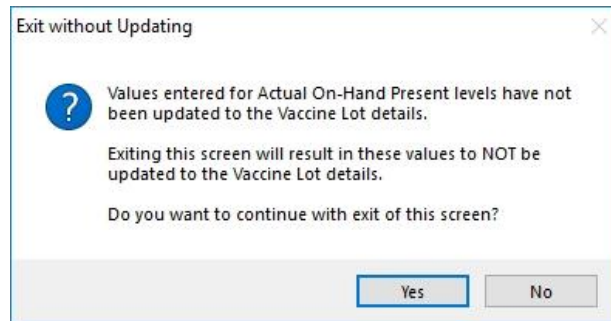
Vaccine Name	Type *	Lot #	Calculated On-Hand	Actual On-Hand Previous	Actual On-Hand Present
DTaP-Hib-IPV	DHI	MC5298AA	0	18	18
DTaP-Hib-IPV	DHI	PC5336AA	0	7	7
DTaP-IPV	DI	M43HB3	0	12	12
DTaP-IPV	DI	MAF543	0	20	20

On-Hand details after Update

On-Hand Details	Beginning	<input type="text" value="19"/>	As Of	<input type="text" value="06/29/2017"/>	Actual Inventory	<input type="text" value="18"/>
	Calculated	<input type="text"/>	Last Calculated	<input type="text"/>	As Of	<input type="text" value="07/05/2017"/>

On-Hand details Updated in Maintenance screen per lot # MC5298AA

When the user has entered new values in the On-Hand Present column for any lots and then clicks the Exit button, the message about not having updated such On-Hand Present levels will be displayed, as shown here:



Upon clicking 'Yes', all modifications to On-Hand Present levels will be discarded and not updated in the main inventory data details.

Details per expired / wasted inventory are to be entered in the Transactions screen accessed from the main Vaccine Inventory screen.

The process of entering these details is discussed in the Health Services Vaccine Maintenance User Manual, beginning on page 36.

Generate system calculation of inventory levels

The updating of inventory levels can be accomplished in either of the following manners:

- **Vaccine Accountability Process in Health Services Reports**

The Vaccine Accountability process is performed by generating the Vaccine Accountability Report located in the **Health Services -> Reports menu**.

This report extracts the details of the beginning on-hand inventory levels and generates tallies for all inflow / outflow of inventory, calculating the updated inventory figures.

The calculated inventory figures are compared to the actual on-hand inventory figures entered in step 1 above.

The report shows any inventory for which the calculated figures and the actual on-hand figures do not match. In the example below, the entry error of a vaccination detail where a private lot was selected when a public lot should have been selected is identified by the system calculating the public lot as having one unit more in inventory than actually is.

TYPE OF VACCINE	BAL LAST RPT AS OF	DOSES ADDED SINCE LAST REPORT				TOTAL DOSES AVAIL	DOSES SUBTRACTED SINCE LAST REPORT					TOTAL SUB-TRACTED DOSES	BOX 1 MINUS BOX 2	END OF REPORT INVENTORY (DOSES)	DOSES UNACCOUNTED	ACTUAL INVENTORY (LOT INFO)			
		IN FROM ODH	IN FRM OTHER HD'S	IN FRM NON-HD PROVID	IN FRM PURCHASED		TOTAL DOSES ADMIN	OUT TO OTHER HD/ODH	OUT TO NON-HD PROVID	OUT TO A) WAS.	EXP. B)					# OF DOSES AS OF	LOT NUMBER	DATE EXPIRES	THOSE EXPIRE WITHIN 90 DAYS
CODE	A	B	C	D	E	BOX 1	(^F)	G	H	I	BOX 2	BOX 3				2			
IDAP 907	7					7	4			a) b)	4	3	3	1		2	9L99Z	10/08/2021	
IDAP	30					30				a) b)		30	30			30	FN74Z	11/28/2021	

When the report is completed, the user will be prompted on whether or not to continue with updating the vaccine inventory records with new, updated figures generated.



If any inventory lots have inventory figures which do not balance, select 'No' to not have the vaccine inventory records updated.

Health Services Vaccine Accountability Procedure

Inventory lots showing a discrepancy is typically due to an error in data entry. Examples of data entry include:

- Vaccination(s) administered not being entered into the system
- Incorrect selection of lot(s) per Adult/Adolescent specification (due to incorrect Age Group specification for the lot in the Inventory Maintenance screen)
- Incorrect lot # specified in a health services record.
- Incorrect details entered in one or more transaction records (lot, date, etc).
- No transaction detail entered.
- Incorrect On-Hand levels entered

Upon identifying and fixing the error(s), generate the Vaccine Accountability report again to verify that all discrepancies have been corrected.

When the On-Hand inventory figures for all inventory lots balance, you may confirm the selection 'to continue with update of Vaccine Inventory data' with newly generated figures from the just completed Vaccine Accountability process.

This will result in the On-Hand details displayed on the main Vaccine Inventory screen being updated, as shown below.

TYPE OF VACCINE	BAL LAST RPT AS OF	DOSES ADDED SINCE LAST REPORT					TOTAL DOSES AVAIL	DOSES SUBTRACTED SINCE LAST REPORT					TOTAL SUB-TRACTED DOSES	BOX 1 MINUS BOX 2	END OF REPORT INVENTORY (DOSES)	DOSES UNACC-COUNTED	ACTUAL INVENTORY (LOT INFO)			
		IN FROM ODH	IN FROM OTHER HD'S	IN FROM NON-HD PROVID	IN FROM FUR-CHASED	TOTAL DOSES		OUT TO ADMIN	OUT TO OTHER HD/ODH	OUT TO NON-HD PROVID	A) EXP. B) WAS.	# OF DOSES AS OF					LOT NUMBER	DATE EXPIRES	THOSE WITHIN 90 DAYS	
SHGC						10	10	4	a)			4	€	€		€	T2CS3	12/01/2021		

Vaccine Accountability Report details in balance

On-Hand Details	Beginning	<input type="text" value="0"/>	As Of	<input type="text" value="01/14/2020"/>	Actual Inventory	<input type="text" value="6"/>		
<input type="button" value="History"/>	Calculated	<input type="text" value="6"/>	Last Calculated	<input type="text" value="01/17/2020"/>	As Of	<input type="text" value="01/16/2020"/>		
Doses Incoming				Doses Outgoing				
From State	From Other HD	From non-HD	Purchased	To Other HD/State	To non-Hd	Expired	Wasted	Administered
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="10"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="4"/>

Vaccine Inventory On Hand updated from Vaccine Accountability Report

You can see that the On-Hand details in the vaccine lot record have been updated to reflect the 10 units purchased and 4 units administered, as reported in the Vaccine Accountability report. In addition, the on hand inventory figure **calculated** by adding/subtracting the total incoming/outgoing doses to the beginning balance matching the Actual Inventory level counted.

Vaccine Accountability snapshot

The vaccine accountability cycle typically coincides with the calendar month.

The vaccine accountability process can be executed multiple times during the cycle, such as on a weekly basis.

This serves two purposes:

1. Identify any discrepancies in data entry errors, transactions not entered, etc. as early as possible. Per there being an error of incorrect vaccine lot selected in entry of vaccination details, the quantity of data to search and find the error is much smaller (i.e. one week's data vs the full month of data) and thus should be much easier to find.
2. By generating the Vaccine Accountability figures and updating the vaccine lot details, the user can see the latest inventory levels as result of vaccination activity since the close of the previous cycle.

When generating the Vaccine Accountability report in the middle of a cycle, be sure to specify the first day of the cycle as the start date for the reporting period.

This is necessary because the generation of the current on hand inventory levels is a cumulative process, reflecting the vaccine activity since the start of the cycle.

- **Calculate On-Hand in the On-Hand Maintenance screen.**

If you use the Vaccine Accountability process as discussed above, do not run this function.

This function performs the same calculation as the Vaccine Accountability. However, this function automatically updates the On-hand detail figures without generating a report and providing an opportunity to abort the process and not update the details.

Move End of Month inventory figures to Beginning of Month

This process is equivalent to 'closing the books' for the completed cycle.

The cycle for the vaccine accountability period is typically a calendar month. However, the **Vaccine Accountability** process is flexible to handle accountability periods of any length, such as weekly, semi-monthly, etc.

When all the activities for a cycle have been entered and the on-hand inventory levels reflected in Health Services match those of the actual inventory, we are ready to run the procedures in preparation for the activities in the next cycle.

Remember,

The **Move End of Month to Beginning of Month** process simply copies the current data values, with no calculations, to the vaccine accountability history data file.

Be sure that you clicked 'Yes' to the prompt for updating the vaccine inventory data with the figures generated by the **Vaccine Accountability** report once all discrepancies have been resolved.

If you haven't, return to the **Vaccine Accountability** report and (re)generate the report for the current cycle, click Yes to update the inventory records with the details generated.

The following tasks are carried out:

- Save a copy of the current On-Hand data details in a historical data file.
This will provide ability to generate the final accountability report for a cycle anytime thereafter.
- Reset the on-hand detail figures.
The End of Month value for the just closed cycle is moved to Beginning of Month value for the next cycle. All remaining figures per activities of inventory are reset to 0.
- Update records in main data files with pertinent details of the just closed accountability cycle, indicating that the records have been processed and posted per final detail values for cycle being closed.

Data files include Health Services details, Vaccine Inventory Transactions, etc.

This insures that the records are not included in the procedures for subsequent cycles. It also logs which historical record the data pertains to so if any modifications to such data require rectifying the historical record, the correct record(s) are updated.

Update Vaccine Lots No Longer in Inventory

With the Vaccine Accountability process for the just completed cycle balanced and closed, we want to edit the details for vaccine lots that are no longer in active inventory.

By specifying such lots as no longer in active inventory, they will no longer show in the list of lots for selection when entering details of new vaccinations. Additionally, they are removed from being included in processes such as Vaccine Accountability.

This helps insure the accuracy in data by preventing incorrect selection of a vaccine lot which is no longer in inventory.

Removing Lot from Active Inventory

The updating of vaccine lots as no longer in active inventory is done by editing the vaccine lot and unchecking the **Active in Inventory** specification, and then saving the modification.

As you enter the Vaccine Inventory Maintenance screen, the display defaults to only show the inventory lots that are in Active Inventory, as shown here

<input checked="" type="checkbox"/> Active Lots Only	
Vaccine	Lot #
DTaP	MC5102AA
DTaP	MC5157AA
DTaP	PC4778BA
DTaP	PC5065AA
DTaP	PC5171AA

One requirement for updating vaccine lots as no longer in active inventory is that **ALL** of the On Hand inventory details must be 0, as shown here.

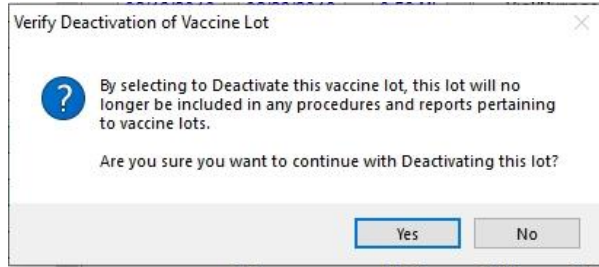
On-Hand Details	Beginning	<input type="text" value="0"/>	As Of	<input type="text" value="06/29/2017"/>	Actual Inventory	<input type="text" value="0"/>		
<input type="button" value="History"/>	Calculated	<input type="text"/>	Last Calculated	<input type="text"/>	As Of	<input type="text" value="07/05/2017"/>		
Doses Incoming				Doses Outgoing				
From State	From Other HD	From non-HD	Purchased	To Other HD/State	To non-Hd	Expired	Wasted	Administered
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

To remove a vaccine lot from active inventory, select the lot from the list and click to edit the vaccine lot detail.

Next, find the **Active in Inventory** specification in the center of the screen just right of the vaccine lot list.

Active in Current Inventory

Click on the checkbox to remove the lot from active inventory. You will receive a prompt verifying that you want to remove the vaccine lot from active inventory.



Click Yes to confirm the removal from active inventory and the check mark will disappear, as shown here.

Active in Current Inventory

Upon clicking to save the change to the lot detail, the vaccine lot list display will update to reflect that the lot is no longer in active inventory.

The following reflects the updated display of the vaccine lot list after having edited vaccine lot PC4778BA as no longer in active inventory, as compared to the lot list display on the previous page.

Active Lots Only

Vaccine	Lot #
DTaP	MC5102AA
DTaP	MC5157AA
DTaP	PC5065AA
DTaP	PC5171AA

As stated previously, removing a lot from active inventory requires that all on hand inventory levels show as to be 0. If a user attempts to remove a lot from active inventory in which at least one on hand inventory figure is greater than zero, the following message will be displayed and the modification of the active status is discarded.



Restoring Lot into Active Inventory

After the entire inventory previously received for a vaccine lot has been administered and the lot updated as no longer in active inventory, you may receive new inventory for the same vaccine lot. As a result, the vaccine lot needs to be edited so as to return it back to **Active in Inventory**.

To return a vaccine lot to Active in Inventory, you just simply need to edit the vaccine lot detail and click on the **Active in Inventory** checkbox and save the modification.

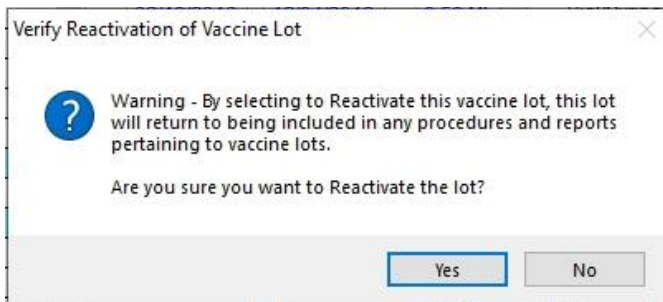
However, as the vaccine lot list defaults to only display lots that are **Active in Inventory**, it will not be displayed in the list of vaccine lots. You will need to indicate that you would also like to see the lots that are no longer in active inventory in the list. To do so, simply click the **Active Lots Only** checkbox above the vaccine lot list, on the left side, removing the check mark.

Upon unchecking the **Active Lots Only** checkbox, the vaccine lot list display will be refreshed to include displaying the lots marked as not in active inventory, as shown below.

<input type="checkbox"/> Active Lots Only	Inactive Lots
Vaccine	Lot #
DTaP	MC5102AA
DTaP	MC5157AA
DTaP	PC4778BA
DTaP	PC5065AA
DTaP	PC5171AA

When the vaccine lot list includes the lots not in active inventory, the lot # for those lots not in active inventory are highlighted in a cyan color. The text **Inactive Lots** above the vaccine lot list and highlighted in cyan color is provided as a reminder of which lots are not in active inventory.

The vaccine lot is updated as to be active in inventory again by selecting the inactive lot in the vaccine lot list, clicking to edit the vaccine lot detail and clicking the **Active in Inventory** checkbox. Upon checking the box, the user will receive the prompt verifying the reactivation of the vaccine lot into inventory.



Upon confirming the update of the vaccine lot to be returned to active inventory, and saving the modification, the vaccine lot is managed as if it was just received and added to inventory for the first time.

Excluding Lot from Data Entry

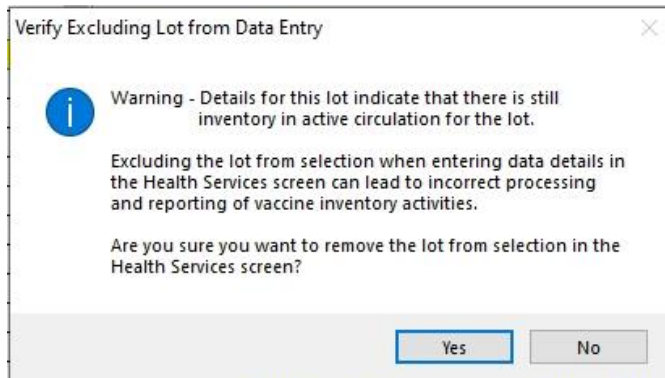
As stated previously, the system will not allow updating a vaccine lot as no longer in active inventory as long as on hand figures indicate that the lot is still in inventory.

However, there may be times that a vaccine lot is to be removed from use but still remain in inventory. As such, you will not want the vaccine lot to be available for selection when entering vaccination details.

The **Exclude from Data Entry** specification is provided to accommodate this situation. The Exclude from Data Entry specification is found in the center of the screen, right of the vaccine lot list and above the **Active in Inventory** specification.

Exclude from Data Entry

A vaccine lot is excluded from selection during data entry by editing the vaccine lot detail and checking the setting. Upon doing so, the user will receive a prompt to confirm the exclusion from data entry, shown here.



Upon confirming the change to exclude the vaccine lot from data entry, the checkbox will show the checkmark, as shown below.

Exclude from Data Entry

Upon saving the update of the vaccine lot to be excluded from data entry, the health services screen will not include the vaccine lot for selection when user is entering a vaccination detail.

When the matter which lead to marking the vaccine lot to be **Excluded from Data Entry** is resolved, and the lot is to be returned to active use in HDIS, simply edit such lot detail, unchecking the **Exclude from Data Entry** specification and save the change.